REMARKS/ARGUMENTS

The Office Action mailed March 16, 2004 has been reviewed and carefully considered. Claims 1-5 are canceled. Claims 6, 7, 8, 9, 16 and 17 have been amended. Claims 6-17 are pending in this application, with claims 6 and 7 being the only independent claims. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

In the Office Action mailed March 16, 2004, claims 6-17 stand rejected under under 35 U.S.C. §112, first paragraph, because independent claims 6-7 recite the limitation "a ceramic protection for the cooling wall on a side of the cooling wall facing the cooling gap". Independent claims 6-7 have each been amended to recite that the ceramic protection layer is arranged on a side of the cooling wall facing away from the cooling gap. This reflects the configuration shown in the drawings.

Claims 6-7 are further amended to recite that the structure of the reactor wall is listed from the outside inward. These limitation were in the original version of the claims 6 and 7.

The Examiner also states that claims 16-17 are rejected under 35 U.S.C. §112, first paragraph, because they recite that the pressure shell is connected to the cooling wall only at the input opening and the output opening. The Examiner states that the specification does not disclose that this is the only connection of the pressure shell and cooling wall. Claims 16 and 17 have each been amended to remove the term "only".

In view of the above amendments and remarks, it is respectfully requested that the rejections of claims 6-17, under 35 U.S.C. §112, first paragraph, now be withdrawn.

In the previous office action mailed on July 3, 2003, Claims 6-7 and 12-15 stand rejected under 35 U.S.C. §103 as unpatentable over DE 35 23 610 (Gudymov) in view of U.S.

Patent No. 4,188,915 (Kummel). Claims 8-11 stand rejected 35 U.S.C. §103 as unpatentable in view of Gudymov and Kummel in further view of U.S. Patent No. 2,231,295 (Price).

Claims 6-15 stand rejected under 35 U.S.C. §103 as unpatentable over co-pending application No. 09/726,826 in view of Kummel.

Claims 6-15 stand rejected under 35 U.S.C. §103 as unpatentable over co-pending application 09/842,224 in view of Kummel.

Claims 6-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-13 of co-pending application 09/726,826 in view of Kummel.

Claims 6-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-12 of co-pending application No. 09/842,224 in view of Kummel.

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief summary of the present invention is appropriate. The present invention relates to a gasifier for gasification of carbon-containing fuel, residual and waste material in a reaction chamber 1. The contour of the reactor chamber 1 is delimited by a cooled reactor wall having inlet opening 2 and outlet opening 8 (see page 5, lines 17-21 of the specification). As shown in Fig. 1, the cooled reactor wall includes a pressure shell 3 surrounding a cooling wall 4 with a water-cooled cooling gap 5 defined between the pressure shell 3 and the cooling wall 4. A ceramic protection layer 6 for the cooling wall 4 is arranged on a side of the cooling wall facing away from the cooling gap (see page 6, lines 8-10 and Fig. 1). A layer of slag and/or a refractory lining 7 may be arranged on the side of the cooling wall 4 facing the reaction chamber 1 (page 5, lines 1-3 and page 6, lines 12-26).

Independent claims 6 and 7 have been amended to clarify that the cooling wall is arranged inside the pressure shell and that the ceramic protection for the cooling wall is on a side of the cooling wall facing away from the cooling gap. This limitation is shown in Fig. 1. Independent claim 6 is further amended to clarify that the layer of slag is on an internal surface of the cooling wall. Independent claim 7 is amended to clarify that the refractory lining is on the internal surface of the cooling wall.

Rejection of claims 6-7 and 12-15 as obvious over Gudymov in view of Kummel

Gudymov fails to disclose an appliance for gasification having a pressure shell and a cooling wall, wherein the cooling wall includes a ceramic protection for the cooling wall on the side of the cooling wall facing a cooling gap between the pressure shell and the cooling wall. Gudymov shows a cooling wall for a reaction chamber which includes two sheets of sheet metal 1, 2 or two pipe sections 3, 4; 5, 6 separated by a space. The sheets 1, 2 or pipes 3, 4; 5, 6 are interconnected by bolts 7. A lining material 19 is arranged on an inner side of the inner one of the sheets 1 or pipe sections 3, 5. Further bolts 8 are connected between the lining material and the space between the sheets 1,2 or pipe sections 3, 4; 5, 6. Each of the bolts is welded in place. The Examiner states that Gudymov fails to disclose a ceramic protection layer.

Kummel also fails to teach or suggest an appliance for gasification having a pressure shell and a cooling wall, wherein the cooling wall includes a ceramic protection for the cooling wall on the side of the cooling wall facing away from a cooling gap between the pressure shell and the cooling wall. In contrast to the claimed invention, Kummel discloses a gasification chamber 2 with a cooling wall 1 which surrounds the gasification chamber 2, wherein the cooling wall 1 includes a plurality of vertical tubes 37 connected between upper and lower rings 4, 5. As shown in Fig. 3, the tube wall also includes vertical webs 38 connected between the tubes 37 by welding to form a gas

tight wall. As described in col. 4, lines 23-25 of Kummel, a ceramic coating is sprayed on the inner side, i.e., the gas chamber side of the tubes 37 of the cooling wall 1. However, Kummel fails to disclose a pressure shell arranged around the cooling wall. Rather, the cooling spaces in Kummel are delimited solely by the pipes 37 and both the pipes 38 and the tubes 37 are part of a single cooling wall surrounding the reaction chamber in Kummel. Therefore, Kummel relates to a different type of gasification appliance in which the cooling channels are arranged within a single outer wall. Accordingly, the combination of Gudymov and Kummel fails to teach or suggest the claimed ceramic protection for the cooling wall on the side of the cooling wall facing away from a cooling gap between the pressure shell and the cooling wall, as now expressly recited in independent claims 6 and 7.

In view of the above amendments and remarks, it is respectfully submitted that independent claims 6 and 7 are allowable over Gudymov in view of Kummel.

Rejection of claims 6-15 as unpatentable over 09/726,826 or 09/842,224 in view of Kummel

Both disclosures of 09/726,828 and 09/842,224 disclose gasifiers in which cooling channels are arranged on an outer side of a wall delimiting the reaction chamber. Neither of these references teach or suggest a cooling gap between a cooling wall and a pressure shell, as expressly recited in independent claims 6 and 7. As described above, independent claims 6 and 7 have been amended to clarify that the ceramic protection is arranged on a side of the cooling wall facing away from the cooling gap. As also described above, Kummel fails to teach or suggest a ceramic protection on a side of the cooling wall facing away from the cooling gap between the pressure shell and the cooling wall. Since neither 09/726,828, 09/842,224, nor Kummel disclose a reactor wall including a pressure shell, a cooling wall, and a cooling gap between the pressure shell and the

cooling wall, it is respectfully submitted that independent claims 6 and 7 are allowable over 09/726,828 or 09/842,224 in view of Kummel.

Dependent claims 8-17, each being dependent on one of independent claims 6 and 7, are deemed allowable for the same reasons expressed above with respect to independent claims 6 and 7.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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